★ OCCUPATIONAL ★ HAZARDS

APRIL 194

There's Profit in PREVENTION

APR 18 1942

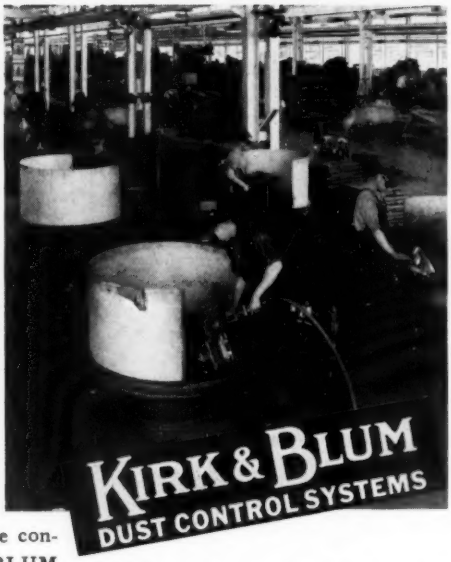
HOUSEKEEPING INSPECTION

In this ISSUE

INDUSTRIAL GOOD HOUSEKEEPING AT:
WESTINGHOUSE · FORD MOTOR
INTERNATIONAL HARVESTER
MONSANTO CHEMICAL
HOW TO OPERATE INFRA-RED SAFELY

THE ONLY MANAGEMENT PUBLICATION DEVOTED TO THE ENGINEERING CONTROL OF
Dusts · Fumes · Vapors · Gases · Organic Solvents · Dermatitis · Industrial Sanitation · Industrial Health and Safety

CAUGHT in the DOWN DRAFT



Dust—the silent saboteur can be controlled at its source. KIRK & BLUM Down Draft Dust Control Systems installed in many industries are efficiently disposing of the enemy—dust. This Down Draft System with bench-high gratings and under-the-floor ducts saves much needed space and clears the air for men and machines.

In the machine tool industry, where precision machinery is exposed to dust, Kirk & Blum Down Draft Systems are saving premature wear by eliminating dust. Workers' health is safeguarded, better products are made and faster schedules maintained.

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- Blower Systems for Woodworking Plants
- Fan Systems for Various Industries
- Industrial Ovens

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Eliminate time waste and inefficiency caused by sweat in your plant! Equip your men immediately with DRYBROW, the 100% satisfactory sweat band.

DRYBROW'S thirsty cellulose sponge absorbs 20 times its weight in perspiration . . . stops frequent brow-mopping . . . stops goggle-fog . . . keeps the eyes free of stinging sweat!

DRYBROW is economical . . . sanitary . . . washable. . . .

DRYBROW is the perfect answer to the sweat problem in your plant!

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SOLE MANUFACTURERS OF "DRYBROW"

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This Money Saving Test Costs You Nothing!

FREE! Just fill in this coupon and a sample DRYBROW band will be sent you by return mail. . . . Test its efficiency for yourself. . . .

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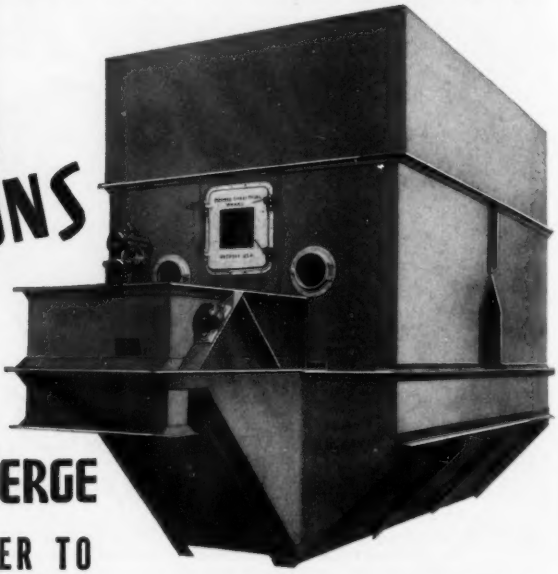
I understand that this places me under no obligation to buy.

6 REASONS *why* CENTRI-MERGE IS THE ANSWER TO Dust and fume control problems



1. Cleaned air may be re-circulated, resulting in greatly reduced heating costs.
2. Cleaning efficiency is constant throughout its daily operating cycle.
3. Cleaning efficiency is constant throughout the life of the unit.
4. Normal maintenance and disposal of collected dust introduce no new health or fire hazard as collected dust is automatically ejected in the form of sludge.
5. No shut downs for cleaning or routine maintenance required during normal working hours.
6. Compact, self-contained unit construction permitting flexibility of arrangement. Engineered for long life and minimum maintenance expense.

WRITE FOR BULLETIN C-M-3

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HEAT-FAG and ACCIDENTS

Ride Together

QUICK DISSOLVING
(less than 30 seconds)
This is how a Morton Salt Tablet looks when magnified. Examine one—see how soft and porous it is inside. When swallowed whole — with a drink of water, they dissolve in less than 30 sec.

BEWARE of Heat-Fag . . . that dangerous, insidious force that saps the vitality of workers — brings on fatigue—and in many cases is the direct cause of accidents. Man-hour protection *must* precede production. When men sweat, they lose body salt. As the natural salt balance in the system is disturbed, there is a definite lowering of efficiency. The worker tires—becomes inalert—careless. A slight mistake and—another costly accident is chalked up. Heat-Fag again takes its toll! *Order Morton Salt Tablets now from your distributor or directly from this advertisement.*

Case of 9000 10-grain salt tablets - - - - - **$2.60**
Salt-Dextrose Tablets, case of 9000 - - - - **$3.15**

MORTON SALT CO., Chicago, Illinois

Place MORTON'S DISPENSERS at all Drinking Fountains
They deliver salt tablets, one at a time, quickly, cleanly — without waste. Sanitary, easily filled, durable. 500-tablet size, **$3.25.** 1000-tablet size **$4.00**

AVOID **HEAT-FAG**--USE
MORTON'S SALT TABLETS

FREE Sample Tube
Write—on your firm letterhead — for a pocket size sample tube of Morton's Salt Tablets and for the new folder — "Heat-Fag and Accidents Ride Together."

EVERYONE WHO SWEATS NEEDS SALT

Wasted!

8,455,000 Man-days

Industrial Eye Accidents during 1940 wasted 8,455,000 man-days of labor—more lost time than strikes (which totalled 6,700,000 man-days). Of these one thousand daily eye injuries, *98% were "wholly unnecessary" if ordinary precautions had been taken. (Forbes Magazine, Nov. 1941)*

These accidents could have been reduced to practically zero if the workmen involved had been wearing one of Jackson's Eyeshields, one of which (Type CH-5) is illustrated here.

This line of up-to-the-minute eye and face shields are exceptionally light in weight, comfortable to wear, well ventilated and equipped with flexible plastacel visors that provide wide unhampered vision. Visors are *quickly adjusted* at *any* angle. Sparks will not effect them, nor will hot metal stick. Standard depth 4"—others to 9". Available in five shades—clear, smoked, amber, light and dark green.

In man-days actually saved, these shields are worth hundreds of times their small cost. *Contact your dealer.*

V. . . —

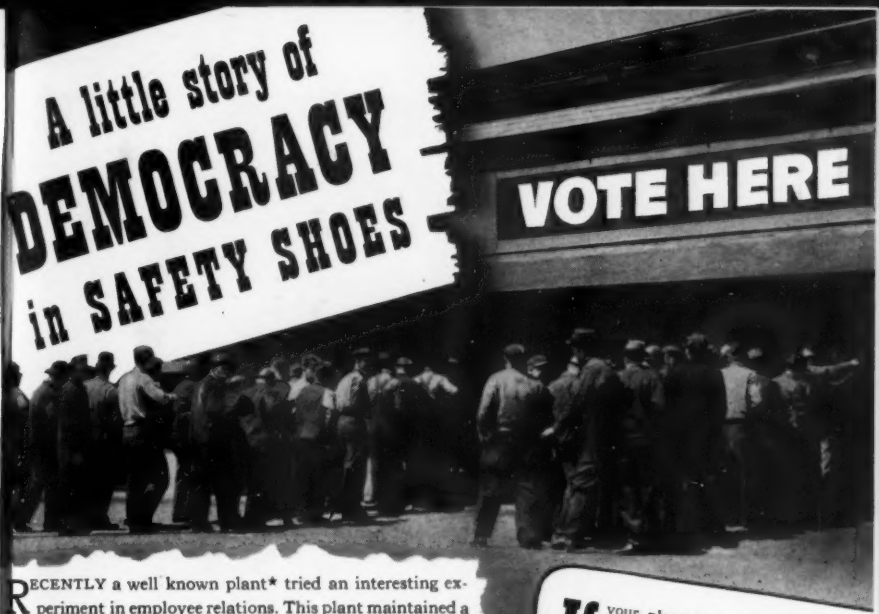
Write today for folder describing our complete line of devices for protecting the eyes and face.

QUALITY JACKSON PRODUCTS

JACKSON PRODUCTS

3265 Wight Street, Detroit, Michigan

A little story of DEMOCRACY in SAFETY SHOES



RECENTLY a well known plant* tried an interesting experiment in employee relations. This plant maintained a stock of Safety Shoes, yet a number of its men were buying Safety Shoes outside—at a local Thom McAn store. The plant decided to add some Thom McAns to its stock, and to let the men's purchases decide what brands to carry. Thus "voting," the men elected Thom McAns—by a sweeping majority.

The Thom McAn name is universally* and favorably known. So is Thom McAn value. Our Safety Shoe line is CONCENTRATED, for production efficiencies, on the dozen BASIC MODELS that fill the great majority of Industry's needs. We can't sell everybody—we don't carry the highly specialized lines. But if your plant has departments where general purpose Safety Shoes are needed, you'll find Thom McAns are lower priced, quality for quality. We think you'll find, too, that your men will prefer Thom McAns to other brands. Why not ask them?

* *Name on request.*

Make this store your Safety Shoe Department

If your plant is in or near one of the more than 300 cities in which Thom McAn retail stores are located, we recommend the:

Thom McAn STORE SERVICED Foot Safety Plan

1. We stock our famous Fitmaster Safety Shoes for your plant in our Thom McAn retail stores—without cost or obligation.

2. Your workmen will buy the first pair without pressure on your part, because they already know and trust the Thom McAn name.*

3. Designed upon findings of a patented research device, fitted in our stores by our own trained fitters, Thom McAn Fitmaster Safety Shoes give proper fit and genuine comfort.

4. Your workmen will continue to wear Thom McAns because they look better, feel better, cost them less than other brands.

If you have a plant shoe department which you wish to continue, Thom McAn Safety Shoes are:

ALSO SOLD DIRECT on special terms, to plants which are volume purchasers.

Thom McAn—SAFETY SHOE DIVISION · 25 West 43rd St., New York, N. Y. · 650 stores in over 300 cities

*MORE MEN buy their shoes from THOM McAN than from ANY OTHER shoe store organization IN AMERICA

A REAL TOOL *for* A REAL JOB!

The Finnell 84-XR
INDUSTRIAL DRY SCRUBBER
for Hard-to-Clean Floors

Removes Hazardous Coatings...

. . . In a Fraction of the Time it Takes with Hand Spuds

This heavy duty *Finnell*, with its two powerful scarifying brushes, digs through and completely removes embedded accumulations of dirt, oil, grease, shavings, et cetera. An invaluable aid for factories with wood, wood block, metal, industrial composition, or concrete floors, not only from the standpoint of sanitation but in the interest of safe floors for workers.

What Users Say:

"Slip and trucking hazards have vanished, thanks to our 84-X *Finnell!*" . . ." Hand-spudding, a back-breaking, costly and unsatisfactory process, got only mediocre results and floors were never uniform or clean." . . . "Thanks to *Finnell* for solving a cleaning problem that has bothered us for years."

Note the low construction . . . makes it easy for this Scrubber to go under lathes, tables, and other equipment. Adjustable handle. Power assured by heavy duty G. E. Motor. Oversize bearings; sturdy, hardened bronze gears. Leak-proof gear case.

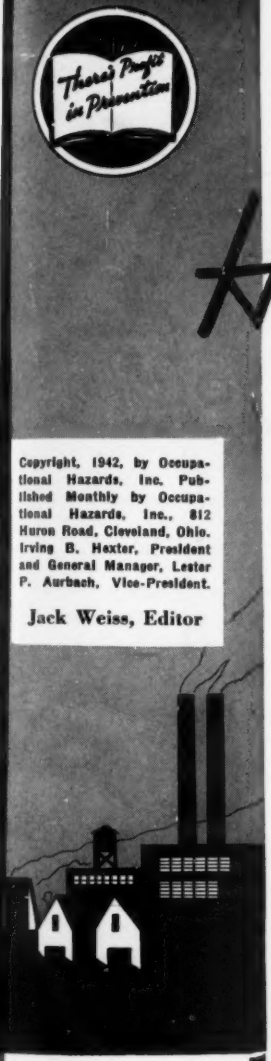
Brush rings are removable . . . may be replaced with conventional tampico or palmetto brushes and used for wet scrubbing, steel-wooling, waxing, or polishing floors.

Free Demonstration on Your Own Floors

See what the *Finnell* 84-XR will do for you. No obligation. For demonstration, consultation, or literature, phone nearest *Finnell* branch, or write Finnell System, Inc., 3504 East Street, Elkhart, Indiana.

FINNELL SYSTEM, Inc.

Pioneers and Specialists in FLOOR MAINTENANCE EQUIPMENT



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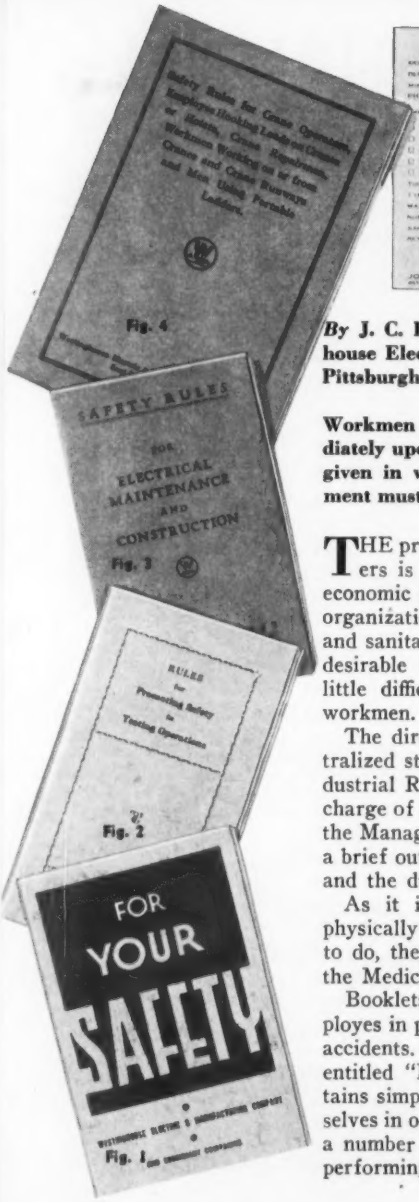
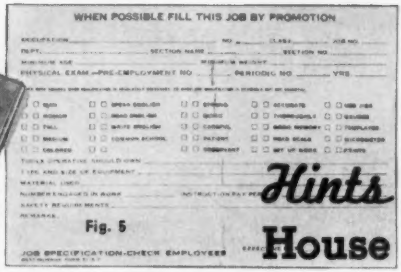




Hints for a Safe House by Wes

By **J. C. BOWER, Supervisor of Safety, Westinghouse Electric and Manufacturing Company, East Pittsburgh, Pennsylvania.**

Workmen are exposed to safety practices immediately upon employment; detailed instructions are given in written form; all manufacturing equipment must be approved before placed in operation.

THE prevention of accidents to industrial workers is an activity that is fundamental to the economic operation of a well-managed industrial organization. Industrial plants that provide safe and sanitary working conditions attract the more desirable applicants for employment and have little difficulty in retaining their most efficient workmen.

The directing of accident prevention is a centralized staff activity and is a section of the Industrial Relations Department. This section is in charge of the Supervisor of Safety who reports to the Manager of the Department. The following is a brief outline of the work handled by the section and the duties of the supervisor in charge.

As it is important that new employees are physically fit to perform the work they are hired to do, they are given a physical examination by the Medical Department.

Booklets are provided that instruct the new employes in performing their work and how to avoid accidents. Every new employe is given a booklet entitled "For Your Safety," Fig. 1, which contains simple instructions in how to conduct themselves in order to avoid accidents and also includes a number of shop safety rules to be followed in performing their work.

for a Safe Industrial
by Westinghouse

Other booklets are provided to those who are hired to work on the more hazardous jobs. One of these booklets entitled "Rules for Promoting Safety in Testing Operations" (Fig. 2) is given to each new employe engaged for electrical testing operations.

Other booklets prepared for new employes hired to do maintenance work are "Safety Rules for Electrical Maintenance and Construction" (Fig. 3) and "Rules for Crane Operators, Hookers-on, Crane Repairmen, Men Working on or from Crane and Crane Runways, and Men Using Portable Ladders" (Fig. 4).

It is the responsibility of the foreman to determine the ability of new employes before assigning them to process operations or to the operation of machine tools. This information is obtained by placing the new employes under the instruction of experienced workmen until the foreman is satisfied that they are sufficiently trained or experienced to proceed on their own responsibility.

It is also the duty of the foreman to see that the employes are provided with the necessary protective equipment to protect them against accidents and safeguard their health. To assist the foreman, the applicants for employment are requested to sign an Application Card that contains an agreement to wear safety equipment and comply with all shop regulations and safety rules. In addition, the foreman is assisted by information recorded on each Job Specification Card, Form 5779 (Fig. 5) as the safety equipment required for the protection of the employe is listed thereon. Periodic special physical examinations are required of the employes working on certain jobs and are also specified on this form.

Safety Equipment

All safety equipment regularly used by the employes has been standardized and is carried in stock. Such articles consist of goggles, safety shoes, welder's equipment gloves, etc. These articles are provided the employes without charge except safety shoes which are sold to them at the same price charged by the manufacturer. Arrangements have been set up for deducting the purchase price from the pay of the employes. Other articles provided for the protection of the employes, that are not used generally throughout the various works departments, are purchased from outside suppliers as they are required.

Division Safety Activities

Although the nature of the work in some departments creates greater accident hazards than in others, these departments do not always have the largest percentage of accidents based upon the number of hours worked. This is due to the efforts of the foremen in maintaining good housekeeping methods, the elimination of accident hazards, and the precautions that are taken by instructing the workmen in safe practices.

(Please turn to page 40)

WHY FORD MOTOR INSISTS ON SANITATION

Sanitary washrooms, proper soap, shower, protective creams and clean clothing contribute to a low dermatitis rate at the Rouge Plant of less than 1½ cases for each 1000 of plant population per month.

★ ★ ★

By THOMAS F. MOONEY, Industrial Hygiene Laboratories
Ford Motor Co., Dearborn, Michigan

Some of the most important factors discussed briefly in this article on the need for industrial sanitation are:

(1) The encouragement of—and the necessity for—personal cleanliness of the worker, especially the skin.

(2) The elimination of irritant material from contact with the workers as far as is possible by engineering control.

(3) The use of protective clothing properly cleaned, serviced, and disinfected.

(4) The application of protective hand creams by the employee before beginning work on exposures likely to cause skin irritation.

According to medical authorities, "Dermatitis" is an inflammatory condition of the skin due to a contact agent—sometimes referred to as Dermatitis Venenata. It is this type of skin irritation which is of chief interest to the Industrial Hygienist. The extent to which the skin will react to an outside irritant depends both on the strength of the causative agent and the susceptibility of the individual.

Important Control Factors

Personal Cleanliness of the Worker

This is a very important item in dermatitis control and should claim a prominent place in any effective effort to lessen the incidence of skin trouble. Personal hygiene, such as bathing and washing, the frequent

laundering of clothes, and other measures which help keep the body clean together with healthy habits, are first line defenses against skin infection.

Today, more than ever before, the employe looks to his employer for those facilities which he feels are necessary for his well-being—and proper washroom facilities are considered indispensable by the average worker.

A typical modern washroom is shown. The workers have clean wash fountain facilities, including hot and cold water, a non-irritating soap, and clean towels. Showers are provided, together with lockers, soap and towel service. Between the lockers and showers, in a narrow passageway, is a foot bath containing a disinfectant. This foot bath is so designed and located that the worker cannot avoid walking through the solution. In this way the spread of foot infections is minimized or eliminated. Foot bath solutions are changed daily.

Protective Clothing

This includes rubber boots, rubber aprons, rubber gloves, armlets, masks, goggles, face shields, etc. These tend to minimize the incidence of dermatitis if properly serviced, cleaned and disinfected periodically, and returned to the tool crib after the workmen are through with them. Equipment of this type, when returned by a worker, should be cleaned and disinfected before reissued to another employee.

We found that in using certain of the coal tar type of products in the disinfection of such articles as rubber gloves, goggle face pieces, and some other equipment, that if the rinsing process was not thorough and carried out in running water, the residual bodies (perhaps phenols or cresols) would cause a distinct reaction where the disinfected article came in contact with the worker's skin.

However, in using a dilute solution of sodium hypochlorite, if the rinsing is incomplete, nothing harmful remains because the unstable hypochlorite decomposes as the article dries, and only a trace of common table salt is left. For over three years this hypochlorite method has, in our hands, proven very satisfactory in preventing skin irritations.

Modern Shower with Foot Bath. Athlete's foot is rigidly controlled.

Most of the protective clothing mentioned lends itself to one of two methods of disinfection:

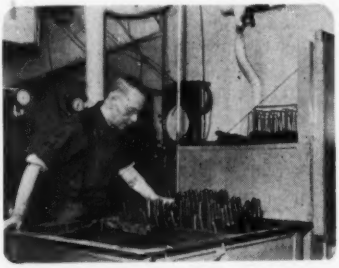
First, for rubber boots, rubber gloves, rubber face pieces, rubber aprons and armlets, a very dilute (0.1%) solution of sodium hypochlorite may be used. These articles are first washed with water, then immersed or sprayed with hypochlorite solution, rinsed, and dried.

Rubber boots are put on a mova-

ble rack and can be washed, disinfected, rinsed, and oven dried while held on this rack. This fixture holds from 8 to 12 pairs of boots with the soles up and allows the solution free access into the fore part of the boot where it cleans, deodorizes and disinfects. When the boot is held in this position, the solution may drain out.

Our rubber gloves are tested with air pressure under water for leaks, and if found defective, they are repaired before the process of disinfection.

In disinfecting rubber gloves, they are pulled over a rack, which holds the fingers distended. While



Disinfecting Rubber Gloves. All new gloves are washed and disinfected.

held on this fixture, they are washed with water, then immersed in the disinfecting bath, rinsed, and dried.

Such a procedure, especially with respect to rubber gloves, will have a gratifying effect on the lowered incidence of skin trouble from this common source. All new gloves should be washed and disinfected before being used by the workmen.

Glove Irritants

Our experience indicates that in new rubber gloves, there are irritants which may cause marked skin irritation. These irritants may be residual chemicals left after the gloves are processed or vulcanized, or perhaps the trouble is caused by some of the dusting powders used in packing the gloves, such as Talc, Mica, etc.

Many cases of dermatitis which are classified as Rubber Glove Dermatitis, if traced, will be found to be caused by the worker trying to do the job without gloves when he has been told and knows that he should use gloves, but who, for some reason, fails to get them until his hands begin to burn and sting or give him discomfort. As the adage runs, "He then proceeds to lock the barn after the horse has been stolen," gets a pair of rubber gloves and goes on with his job. Soon he visits the Medical Department with his hands covered with blisters. The report shows dermatitis caused by rubber gloves. Actually the man got the irritant on his hands and then put on the rubber gloves. Such a procedure, of course, invites trouble.

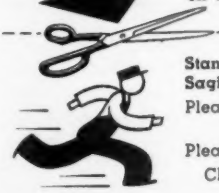
If this worker had taken the precaution to clean his hands and applied a small amount of protective cream and had used clean disinfected gloves preventing, during the work period, the ingress of any irritant inside of his glove, the likelihood is that there would have been one less case of dermatitis, and medical treatment from one to several weeks would have been unnecessary.

The second method of disinfection is a soap solution to which a suitable coal tar or other disinfectant, has been added. This is for

(Please turn to page 36)

PAY FOR THEMSELVES IN 18 MONTHS!

You'll want all the details about the unique new Mercury Model LC-54 Group Washfountain with ten individually operated sprayheads which, because of their automatic shutoff feature, save enough on water bills to pay for the fountain in 18 months. • Complete descriptions of all models together with methods of installation, engineering features, and specifications are clearly given in an interesting new catalog which is yours on request.



Standard Washroom Equipment Div., Sugar Beet Products Co. Saginaw, Mich.

Please send me the new Mercury Group Washfountain Catalog

Please print Clearly

Send to_____

Company_____

Address_____

City_____ State_____

How to Operate Infra-Red Safely

By **PAUL H. KRUPP, Fostoria Pressed Steel Corporation**
Fostoria, Ohio

TODAY, when nearly all industry is working on an "all-out" war production basis, it is imperative that not only should there be no interruption from machines or methods, but that every man should be at his station at all required periods.

This urgent need behooves all managers to specify plant equipment that operates at a maximum of safety both from the standpoint of production and workmen.

The Near Infra-red Process, one of the newer methods used by industry today to bake, dry, dehydrate and preheat, affords the maximum safety necessary, especially in the baking and drying field when highly volatile synthetic industrial finishes are used.

J. O. Case, president of Quality Electric Co. at Los Angeles, and a distributor of Near Infra-red equipment, realized that there was always the question of safety in installing any new equipment, and decided to have the answer at hand should he be required to offer substantial proof.

He found that the near infra-red drying tunnel, out in the open, is, perhaps, the safest and quickest method of drying synthetic finishes that is available.

Material Used

Solvents usually employed in these finishes are ruluol, which has a flash point of 53°F., hydrocarbons, coal tar derivatives, aromatic petroleum solvents with a flash point of 80°F., and lacquer thinner with a flash point of 50°F. Because all these solvents are below 100°F. flash point, which is the recognized point below which solvents are considered hazardous, there existed an impression that infra-red radiation could create fire or explosion hazard.

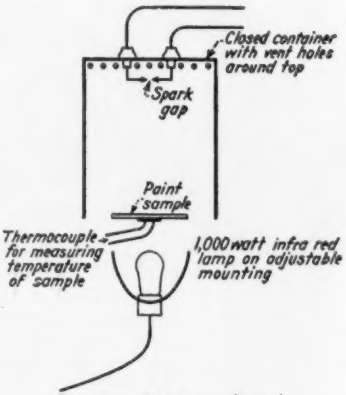

Closed container with vent holes around top
Spark gap
Paint sample
Thermocouple for measuring temperature of sample
1,000 watt infra red lamp on adjustable mounting

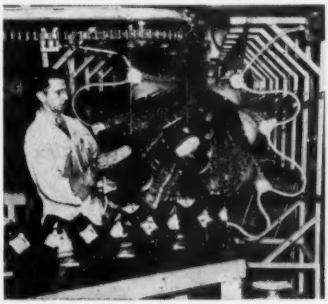
Diagram of tests conducted.

These tests proved conclusively that no fire or explosion hazard exists.

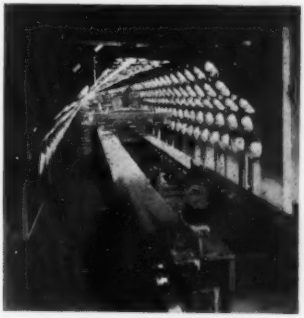
A five-gallon circular metal container was mounted in an inverted position, a series of ¼ in. holes having been made around the junction of the bottom of the container

with the sides to permit circulation of air. At the bottom open end of the container, which was 12-in. in diameter, two cross wires were mounted, upon which were laid the 5-in. by 7-in. 20 gauge metal plates which were heavily coated with the various types of synthetic finishes and lacquers with which the tests were conducted. At a point of four inches below the upper part of the container a spark gap was mounted, and a continuous ½-in. spark was maintained during the tests.

Underneath the metal plates used in the tests was mounted a 1000 watt infra-red lamp in a deep bowl reflector, capable of heating the plates to a temperature of 900°F. To the plates was attached a thermocouple to check temperatures.



Aircraft Engine parts get several coats of finish baked at Jacobs Aircraft Engine Co.



Baking two coats of finish on frames and chassis of "Jeeps" at Willys-Overland.

The first test consisted of spraying a metal plate with one of the common urea-formaldehyde synthetics and heating it to the ordinary baking temperature of 250°F. A considerable cloud of volatile solvents was driven off and these completely filled the container in the upper part of which the spark gap was in operation. The bottom of the container being open and with vent holes in the top permitted circulation which insured mixture of air with the fumes which would tend to make a more explosive mixture. The heat was applied for fifteen minutes, or until all of the solvents were driven off. At no time during the test was there any flash whatever in the container nor was the spark brighter than in air.

Ignition Tests

Ignition tests were made of the fumes as they came out around the bottom of the container and also those coming out of the vent holes at the top, and at no place could an ignitable mixture be found.

The test was repeated, using a very heavy coat of synthetic, and running the temperature up to 375°F. While there were a great deal heavier fumes than before, due to more intense heat, there was no more indication of either fire or explosion than before.

TOTAL WAR ON HEAT CRAMPS!

U. S. Forces and Industry Use Sterling Salt Tablets!

FOLLOWING the practice of progressive industrialists, the United States is now supplying salt tablets to men in the service to prevent heat cramps in hot climates. Salt tablets have proved extremely effective in combatting this source of danger and discomfort in industry.

WHY STERLING SALT TABLETS PREVENT HEAT CRAMPS... In general, heat cramps are brought on by loss of salt in the human system through excessive perspiration, resulting from work in high temperatures. The adequate replacement of salt-loss will eliminate the cause. Yes! Plain ordinary table salt taken with drinking water is a good preventative. Sterling Salt Tablets of compressed refined salt permit quick storage of the extra vital crystals needed to combat heat cramps. When preferred, Sterling Salt Tablets can be supplied with 70% salt and 30% dextrose for *extra* energy!

Prepare now for the hot weather to come . . . install Sterling Salt Tablet dispensers in your plant. For full information, write to . . .

INTERNATIONAL SALT CO., INC.
SCRANTON, PA.

STERLING SALT TABLETS

The test was again repeated, running the temperature to 500°F. and still no trace of ignition. The temperature was then increased to 750°F. at which point the synthetic finish burned off the metal, but did not ignite, indicating that even in case of an arc or molten particles falling on the enamel it would be impossible to ignite it from this cause. The last test was conducted using lacquer and at 300°F. baking temperature. There was no indication of ignition in this test. During all of these tests a flame applied directly to the material before baking did not ignite it.

Hazards Minimized

From these tests, all of which were much more severe than in normal operation, it appears that the fire and explosion hazard with the use of infra-red radiant energy is nil. These tests check with the report of Benjamin Richards, chairman, NFPA Committee on Manufacturing Hazards.

In addition, the near infra-red method does not create excessive heat surrounding the process equipment, which is a desirable feature for workmen, especially since certain fungi skin diseases thrive more readily where sweat and moisture are present.

However, should workmen be desirous of availing themselves of the benefit of the radiant energy waves, they will find them quite agreeable and beneficial in aiding the cure of such ailments as sore throat, athlete's foot, ring worm, sinus infection, and other similar ailments.

"Paper Cups in Industrial Good Housekeeping"

By **HARVEY M. HALL**

Here's how paper cups fit into the industrial sanitation picture; easier to use with salt tablets

RECOMMEND good "housekeeping" to a plant manager fifteen years ago and the reply might have been a contemptuous snort. "Huh!" he would exclaim, "d'you think we're a bunch of old women, with nothing to do but dust and sweep? We *make* things!"

Today, plant managers know cleanliness to be a tool of production—essential if a plant is to maintain a force of men who can "make things" without costly interruptions caused by sickness.

Clean surroundings are desirable, as a morale factor, but cleanliness, wherever food and drink is served, is an absolute necessity to good health. Carelessness or ignorance in such quarters may influence considerably the total number of days lost because of respiratory diseases which strike workers—strike them so often that such diseases are responsible for half the sick absenteeism in industry. Colds alone cost each worker $15 in lost wages, drugs and medical bills each year, and present industry with a total bill estimated at $450,000,000.

The relationship of poorly washed glasses to colds and other respiratory ailments is ably expressed in a recent warning broadcast by a New Jersey Health Department: "Our first job is to deal with any person, place or thing that may cause or spread disease among defense war industry workers. Such places are unsanitary public eating places. Such things are improperly washed glasses, dishes and utensils in public eating places and common drinking glasses."

Men of science and job foremen agree. From an eminent public health authority comes the declaration that mumps, scarlet fever, measles, influenza, tuberculosis, Vincent's angina, and colds may be contracted indirectly "in food and drink, by hand to mouth infection, or by such vectors as cups, spoons and other things that are mouthed." From job foremen come reports like this one last month: "On a road job recently, six cases of 'trench mouth' resulted from the use of a water bucket and dipper."

The Glass Must be Abolished

A simple and generally accepted way to block the spread of diseases via the unwashed glass is simply to abolish it! Though laws in every state do, in fact, forbid its use, it still may be found in some industries. In one-fourth of the manufacturing plants in Pennsylvania surveyed recently, common glasses were the only means of drinking available to workers.

Wide-awake employers, however, are providing for workers single service paper cups, recognized everyhere as of unquestioned sanitary excellence. On one construction job where workers used only

paper cups for drinking water, the men at first were called "sissies"—but the "sissies" continued working for six months without a single cold while their tormenters took to their beds with sniffles!

Study Proves Point

Recent studies at the University of Pennsylvania indicate the wisdom of providing paper cups in dispensers, alongside every fountain, sink or faucet. Despite such improvements as angle jets on fountains, these new studies reveal that fountains are still far from satisfactory. The investigation, which covered twelve fountains in buildings of the University of Pennsylvania, showed that thousands of bacteria collect in drain lines, bowls and nozzles of fountains and that these bacteria may be transmitted, to users, through splashing water. Fountains are clogged and further contaminated by sputum and such debris as food, chewing gum and cigarettes frequently deposited in bowls. Furthermore, water pressure was found to vary greatly even in modern fountains with the result that when pressure is low, users must press their lips against fountain nozzles to get a drink—a widely condemned practice. With the simple addition, on each nozzle, of a goose neck attachment and a dispenser of paper cups alongside the fountain, a "safe" drink of water is guaranteed.

Portable Water Tanks

For workers on construction jobs or those located in remote sections of huge factories, such as bomber plants, there are now in wide use portable water tanks, each with its own dispenser of paper cups fastened to the tank. These tanks are strapped on a man's back and carried to workers.

Paper Cup Services

Many plant managers now insist that all food or drink, served inside the plant, must be served in paper, because broken dishes or bottles may cause accidents and offer an opportunity for sabotage. Paper cups, therefore, are used in plants for drinking water, and wherever vitamin capsules, salt tablets, fruit juices or soft drinks are dispensed, and for meal service. Wholesome regular meals and "between-meal" feedings are provided workers through the use of mobile units from which food is served in paper cups and containers. Plant managers point out that when paper cups are thus used, many employees can be served at once since paper cups can be stored to take little space; no large investment in china, kitchen help and dish washing machines is necessary; the health of employees, who might otherwise eat scanty, unwholesome lunches in "joints" near factories where glasses and dishes are often only briefly "dunked" between uses, is safeguarded; and finally, paper cups and containers are easily disposed in receptacles provided specially for that purpose.

The progressive plant manager, then, realizes that paper cups and containers are valuable aids to an efficient housekeeping program.

NEXT MONTH
"FIRST AID IN INDUSTRY"

now...Lehigh Safety Shoes for WOMEN!

Photo courtesy "Aviation Magazine"

13½ MILLION WOMEN ARE AT WORK today, speeding America's war effort. And we haven't begun to fight! As our growing armies continue to drain industrial manpower, the number of women in industry will double or treble! Trouble for the Axis? And how! But trouble, too, for America's Safety Engineers. For the average woman on her first industrial job will know far less about protecting herself from injury than men do.

Some safety goggles, masks, aprons, gloves and other protective clothing you already have, can be used as readily for women as for men. But not your safety shoes! Yet toe-protection is essential! For, even among skilled work*men* and under leisurely peacetime conditions, *one out of every four* industrial accidents injures someone's feet or toes. With *un*trained women working under *war-pressure*, this proportion of foot and toe injuries is bound to rise sharply in your plant . . . unless adequate safeguards are provided!

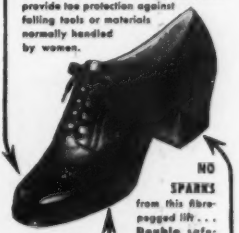
LEHIGH MEETS THIS EMERGENCY NEED by being first to offer safety shoes for women in industry . . . vital safeguard to the increased production which alone can win this war. Because **AMERICA'S ZERO HOUR IS NOW,** send today for a half-dozen pairs of these new shoes and test them on the feet of your present women-workers. There'll be little time to "shop around" for toe-protection when injuries have bottle-necked your production lines!

CHECK THESE ADVANTAGES:

★ **JUST ONE STYLE!** Simplifies your safety shoe inventory.

★ **NURSES' SHOE LAST** fits almost every foot in complete comfort.

DOUBLE THERMOPLASTIC TOE BOX instead of armorplate steel. Lighter, more comfortable, yet strong enough to provide toe protection against falling tools or materials normally handled by women.



NO SPARKS from this fibre-pegged lift . . . **Double safeguard** for munitions workers!

STURDY, YET FLEXIBLE SOLE gives extra long wear. Goodyear Welt construction permits resoling.

LEHIGH SAFETY SHOE CO., INC.

ALLENTOWN, PA.

Poor Housekeeping Causes Accidents

Here's a list of good housekeeping habits

THE term "housekeeping," as it applies to work establishments, may trace back to the early days of the Industrial Era when hand craftsmen fabricated articles in their homes. If so, it was not until the day of modern mass production (involving specialization, coordination, and timing) that "poor housekeeping" became a major source of inefficiency and waste, one form of which is accidents to persons.

Good housekeeping is generally considered to be related, primarily, to production. Improvement in the arrangement, order, and condition of workroom facilities increases production efficiency and also eliminates definite accident-producing circumstances. However, records of accidents resulting from poor housekeeping, show that owners and managers are justified in devoting attention to plant order from the safety viewpoint alone. As with other production and accident-prevention problems, results are best accomplished by directing responsibility to the supervisors and, in turn, to the employees involved.

Note the general atmosphere of cleanliness in this photograph. Such attention to good housekeeping inspires clean cut work. Expense for such a program is small compared to ultimate results.

Foremen and workers should acquire and practice the following good housekeeping habits:

1. Provide a safe storage space for all material, tools, and equipment.
2. Keep all excess material and tools, when not in use, in racks or bins, or stored in other approved ways.
3. Arrange stored objects or material in stable piles at a safe distance from work areas and passageways.
4. Collect and dispose of promptly, all sweepings and other unwanted or waste material, particularly that which will burn easily.
5. Do not leave equipment or other objects on a commonly traveled area of floor, nor on any stairway.
6. Do not place an object in an insecure position, particularly over a used area or stairway.
7. Maintain lighting, sanitation, and ventilation facilities in good condition.

TOURING With the GOOD HOUSEKEEPING Committee

International Harvester, Springfield Works, Outlines Their Plan for Effective Housekeeping Practices. Plant Procedure, Personnel Requirements Are Reviewed.

By WALTER L. HALLAM, Springfield Works International Harvester Company—Springfield, Ohio

INDUSTRIAL HOUSEKEEPING and productive plant operation are so closely related that it would be an utter impossibility to separate one from the other. It would likewise be unreasonable to believe that an industrial safety program would be complete or even possible without first having given considerable thought and action to the matter of industrial housekeeping.

It is my belief that one of the best safety examples we can set for the employees is by the manner in which we keep our "Industrial House."

The jobs to be included in an Industrial Housekeeping program are numerous and varied in nature and, of course, depend largely upon the type of industry in which we are engaged.

Touring the Plant

Here are some of the things that we must consider in housekeeping activity. First of all we must have clean, well lighted, well ventilated and well ordered work rooms and storage spaces. All sanitation facilities should be in good working order. Toilets, wash fountains, drinking fountains, shower apparatus, all need their share of attention. Floors and walls require de-dusting, scrubbing, and all over appraisal. Consideration should be given too, to plant yards and roadways.

Should the organization be a small one employing not more than 500 persons, the safety engineer can no doubt personally inspect the various departments of the plant, determine its housekeeping needs and likewise give the foreman or department head considerable help in planning ways and means of correcting any improper conditions that might exist. However in the larger plants because of his many duties the safety engineer must have considerable help in carrying out his duties and especially in making his housekeeping inspections.

How to Make Inspections

We handle the good housekeeping inspection activity at our plant in a systematic manner. Our Plant Committee is composed of the Works Superintendent who acts as

What every workman's coming to know

What every workman's coming to know

Taut, soap-toughened hands hamper a man's work and lead to dermatitis infections. But your workmen can tell you how Lan-O-Kleen has helped them.

How do they come to know Lan-O-Kleen? If they've come to you from neighboring shops, they've probably used it there. The list of industrial firms that have found Lan-O-Kleen the most profitable washroom soap, includes just about the best names in America.★

The PLUS value in using Lan-O-Kleen is a combination of improved employee relations, downright economy per soap ration per man per month, and *a basic aid in prevention of occupational skin diseases.*

Lan-O-Kleen is a double-action corn-meal soap, impregnated with emollient, lanolin . . . First, it removes practically all types of dirt and grime—*without getting tough about it.* Then it "Work-Conditions" the hands by putting on an oil similar to natural skin oils. And the automatic Lan-O-Kleen dispenser rations it thriftily.

It's something every production-minded plant should know about!

★ We'll show you a list of their names if you're interested.

* Trade Mark Reg. U.S. Pat. Off.

WEST DISINFECTING COMPANY

SERVING AMERICAN INDUSTRY FOR OVER 50 YEARS

55 BRANCHES Coast-to-Coast and in Canada

CLIP TO YOUR BUSINESS LETTERHEAD, PLEASE

West Disinfecting Company, Dept. OS, 42-16 West Street, Long Island City,

Please send me a SAMPLE QUANTITY of Lan-O-Kleen with which I will give your claim a practical test. Please include your folder explaining its use.

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chairman of the committee, the Assistant Superintendent, Plant Engineer, Production Engineer, two or more Foremen and the Safety Director, who acts as secretary. This committee is more or less a stationary committee with the exception of the foremen, who are changed periodically. The duty of this committee is to consider all matters of policy pertaining to Health, Safety and Sanitation, and to rule on the more important phases of the Safety Program.

Next we have the Shop Safety Inspection Committee. This committee is made up of four workmen, one picked from each of the four divisions of the plant.

The plant has been broken down into four divisions as nearly equal in size as possible for inspection purposes. Each of these committeemen has an alternate to act in his place in case he should be absent for any reason. The duty of this committee, as its name implies, is to inspect one of these four divisions once each week. A full eight-hour day of each week is spent on such inspection trips.

This committee is on the alert for all unsafe conditions and practices and is especially watchful for conditions that would indicate poor housekeeping practices. A record in duplicate is made of all their findings in each department. This report is taken to the foreman or department head for his signature. One copy is left with the foreman, the other copy retured to the Safety Department. The foreman's copy serves more or less as an order to perform or to have performed certain necessary work to place his department back into a good, orderly and safe place in which to work. Should this work not be completed within a reasonable length of time, that particular foreman hears from the Safety Department.

Eye Protection

A few suggestions about this problem of eye protection. One of the most important, and perhaps the first thing to do in starting a good eye protection program, is to keep adequate and accurate records of accident costs. Second, make your report in terms of dollars and cents and not in man hours. If the management is informed that $200 was lost last month because of eye injuries and $100 is needed to equip everybody with goggles to prevent a recurrence of this expense, approval of the expenditure will probably be made without question.

At this point a striking case can be cited. In 1929 a company in the metal working industry employed 41,500 people, and their bill for eye accidents in that year alone was $51,000. The safety director was on his toes and saw what could be done. He presented his figures to the management and received their support in the inauguration of an eye protection program. In 1936 their bill for eye injuries was only $5,800 as contrasted with $51,000 while their workers numbered 2ooo more.

Now, assuming that they paid $30,000 for eye protection equipment, this manufacturer is still $15,000 ahead of his 1929 figure and that's a sizable saving.

In this connection, consider the very large proportion of accidents

And Now . . . . The Well Dressed Woman in Industry

America's feminine working force will feel just as at home in WORK-EZE work garments as in their Sunday best. Plenty of styling. Designed in conjunction with the U. S. Bureau of Home Economics, WORK-EZE coveralls are neat . . . are comfortable. They have many SAFETY FEATURES.

WORK-EZE FEATURES

Short Sleeves!
Breast Pocket!
Sleeves set for freedom of action!
Adjustable belt with buckle fastening!
Attractive dust-proof materials!
Legs have tab adjustment!
Matching visor cap!

Your female workers will welcome WORK-EZE. Watch production soar. Write today for circular that illustrates all SAFETY FEATURES.

THE CLEVELAND OVERALL COMPANY

Manufacturers of Industrial Clothing

1768 East 25th Street **Cleveland, Ohio**

which are attributed to not a single material cause or unsafe act, but rather which can be considered the result of a chain of events which culminated in the accident. If foreseen and acted upon quickly enough, the accident could conceivably have been averted.

Full Time Inspection

Management also has provided for inspection of all mechanical equipment at regular and frequent intervals. Moving parts are given special attention to make sure that bearings, keys, gears, sprockets, shafts, starting and stopping devices, etc., are in good condition.

We also have three men in the Millwright Department who are assigned full time to the making and maintaining of guards, the inspection of ladders and elevators, etc. Another employee in the Millwright Department devotes all of his time to the inspection of overhead equipment such as: cranes and hoists, balancers, portable transformers, etc. Two men in the Tool Department are assigned full time to the inspection and maintenance of Punch Press Guards and Safety Devices. Very active is the Chief of Fire and Watch and his assistant, along with a staff of watchmen who are constantly on the alert for housekeeping conditions that result in fire hazards.

Yet with all these persons actively engaged in the Housekeeping Program it is still far from being perfect and probably never will with conditions changing so rapidly. We feel, however, that we will be in a position to handle the many good housekeeping activities because of the effectiveness of our basic organizational plan.

Right off the Docket

The trend of litigation on workmen's health and accident compensation is reflected in these briefs of the latest and most representative cases coming to trial in the intervals between issues. Familiarity with this trend is important to every industrialist.

Heart Strain Award Granted Despite Previously Weakened Condition.

The employee in this case had suffered an attack of rheumatic fever in 1921 when he was 13 years old. The attack left his heart in a weakened condition. In 1928 he left school and went to work. In 1932 he became ill and was confined to a hospital for a month suffering from heart disease. He worked at various jobs thereafter and suffered little from his heart condition. In 1936 he got a job with the defendant company which was in the business of manufacturing light metalware. The employee was a helper, usually on light jobs. However, from time to time he did operate the different machines in the plant. In 1938 while operating a pipe rolling machine which required the exercise of hand pressure on a handle, the employee experienced pain and complained to the foreman that the work was too heavy for him. From that time on the claimant was in a weakened condition and found any work difficult. In February, 1939, he ceased work and filed a claim for compensation.

After conflicting decisions had been rendered in the lower courts, the Supreme Court of Washington granted an award. It found that though the heart of the claimant had been impaired previously, his work added to the damage. The court stated that an accident is one "arising out of employment," within meaning of the compensation act, where the required exertion producing the accident is too great for the workman undertaking the work, whatever the degree of exertion or the condition of the workman's health.

Northwest Metal Products, Inc. vs. *Dept. of Labor and Industries* (Wash.) 120 Pac. 2nd 855 (Jan.-1942)

Employee Being Allergic to Cleaning Compound Does Not Prevent Dermatitis Award.

The employee developed a dermatitis from the use of a certain cleaning compound. The evidence showed that the claimant was allergic to the substance contained in the cleaning compound and consequently was more susceptible to the development of a dermatitis from it than persons not having such susceptibility. This did not prevent an award.

Under the Workmen's Compensation Act, providing compensation for injuries caused by accident or disease arising out of employment, any disease that is caused by an employee's work becomes compensable notwithstanding an allergic tendency of the employee to the conditions that made the disease possible.

Kroger Grocery & Baking Co. vs. *Industrial Com.* (Wis.) 1 N.W. 2nd 802 (Jan.-1942)

Strain of Heavy Weight Causes Cerebral Hemorrhage.

The claimant, 60 years of age, worked as a meat carrier in the em-

ploy of a wholesale provision dealer. One day while unloading a truck of meat a veal carcass was placed on his shoulders. He felt a "jerk" and immediately became weak. In a few minutes the employee collapsed.

It was found that the employee was suffering from partial paralysis of the left side of his face, and paralysis of an arm and leg due to a cerebral hemorrhage. This disability was held to be the result of a compensable injury arising out of and in the course of employment.

In re Wheaton (Mass.) 38 N.E. 2nd 617 (Jan.-1942)

Award for Hernia Reversed.

The Workmen's Compensation Commission and the St. Louis Circuit Court awarded the claimant in this case compensation for a hernia injury. The St. Louis Court of Appeals reversed those decisions and decided the employee was not entitled to compensation.

The employee had been suffering with a hernia and a weakened condition of the inguinal ring. He lifted a heavy box of oranges into the trunk of an automobile. The strain of lifting aggravated his hernia due to intra-abdominal pressure, and resulted in a right indirect inguinal hernia. The court in refusing an award held that there was no evidence of an unusual occurrence, such as a fall, slip or abnormal strain. The employee merely used his normal strength in the normal and usual way and consequently it could not be said that he sustained an accidental injury arising out of and in the course of employment.

Sciortino vs. *E. Salia & Co.* (Mo.) 157 S.W. 2nd 535 (Jan.-1942)

Linotype Operator Gets Dermatitis from Lead Alloy Fumes.

Linotype machines require a melted lead alloy from which the type is made. In the plant where claimant worked as a linotype operator, pots electrically heated were used in connection with the machines to melt the metal. There was no apparatus to remove any fumes that resulted. The pots were closed except when the metal was put in. The claimant had to open the one attached to his machine for this purpose, and at times when readjustment was necessary. He also handled sticks of type which had not cooled. He developed a dermatitis. Tests indicated that the dermatitis resulted from the fumes volatilized from the melting antimony which was one of the elements in the lead alloy, and from handling the hot type. The claimant was found to be unusually susceptible to the hazard which caused the dermatitis.

An award was granted. The dermatitis was held to be compensable as an "occupational disease" notwithstanding the fact that only employees unusually susceptible would suffer from it.

Le Lenko vs. *Wilson H. Lee Co.* (Conn.) 24 Atl. 2nd 253 (Jan.-1942)

Decision Reversed.

Some months ago, in this column, a case was reported wherein an award was granted for the death of a salesman due to heart failure. The death resulted from the emotional excitement of an angry argument in which the salesman engaged on the highway with the occupants of another car. At the time of the altercation the salesman was driving his car in the course of his employment.

In reversing the decision the New Jersey Court stated, "The dispute here was not reasonably incident to the employment nor such as the employer might reasonably have anticipated. It was entirely foreign to the employment, therefore the death is not compensable."

Geltman vs. *Reliable Linen & Supply Co.* (N.J.) 23 Atl. 2nd 272 (Dec.-1941)

Heavy Lifting Causes Tuberculosis Flare-Up.

A laborer while lifting a 300-pound bag of scrap complained of pain in his back and abdomen. It was found that the employee had suffered a lumboscacral strain. Previously, the employee had a condition of quiescent pulmonary tuberculosis. The strain of the lifting caused the tuberculosis to flare up and resulted in the death of the employee. The death was held to be compensable as being the result of

DO YOU HAVE DANGEROUS FLOORS?

Do greasy accumulations on your plant floors cause lost time accidents? Do your floors increase truck repairs?

Use KENT FLOOR MACHINES for *thorough, easy, fast* scrubbing to remedy slippery conditions. Made in various sizes to suit your needs.

We invite your inquiries on any problems applying to Floor Scrubbing or Industrial Vacuum Cleaning.

We have licked many special problems!

THE KENT COMPANY, Inc. 217 Canal St. Rome, New York

an accident sustained in the course of employment.

Jenkins vs. *A. Abramson & Son, Inc.* (N.J.) 23 Atl. 2nd 122 (Oct.-1941)

Digested and Compiled by
HILTON E. ROBERTS
Member of the New York and Ohio Bar

American Standards List Available Free

The American Standards Association today announced the publication of its new list of American Standards for 1942. In view of the importance of standards and specifications, not only for every day work but to speed up production for defense, this particular list of standards should be in the hands of the engineering and purchasing departments of every manufacturing firm in the United States.

Nearly 500 American Standards are listed in a wide variety of industrial fields and in the fields of industrial and public safety. There is a separate heading for American Defense Emergency Standards—standards developed specifically for defense purposes, and for the first time all American Safety Standards are listed together in a separate section.

These standards include definitions of technical terms, specifications for metals and other materials, methods of test for the finished products, dimensions, safety provisions for the use of machinery, and methods of work. They reach into every important engineering field, serving as a basis for many municipal, state, and federal regulations.

In each case these standards represent general agreement on the part of maker, seller, and user groups as to the best current industrial practice. More than 600 organizations are taking part in this work. The standards are frequently reviewed and revised in order to keep them in line with changing industrial needs. New standards, and those brought up to date within the year are especially marked in the list.

This list of American Standards for 1942 will be sent free of charge to anyone writing in for it. Requests should be addressed to the American Standards Association, 29 West 39th Street, New York, N.Y.

* * *

The Sanitation Man

How little we notice—what attention do we pay
To what happens to the rubbish that we toss away each day?
The junk we throw upon the floor instead of in the can
Causes extra toil and labor for the SANITATION MAN.

Each morn when we return to work the shop is clean and neat.
No refuse piled upon our bench—no dirt beneath our feet.
Things are again in order far as the eyes may scan.
For which we can be thankful to the SANITATION MAN.

Those overalls that looked like sin—that tattered shirt and sock.
I saw you toss them in the bin amongst the pans of stock.
"You shouldn't be so careless and so sloven," spoke up Dan,
You're making work and hardship for the SANITATION MAN.

You toss the wrapper from your lunch—you care not where it lands.
Your orange peel and apple core you drop right, where you stand.
You smashed a bottle on the floor when you missed the bottle can.
You cause no end of worry for the SANITATION MAN.

You never hear him grumble—no favors does he ask.
His work is plain and humble—indeed—a thankless task.
With but a single thought ahead—to make things spick and span
He toils to earn his daily bread—the SANITATION MAN.

With just a little thought and care, we're sure to have less dirt.
Clean surroundings are essential, Our health they'll never hurt.
Let's practice sanitation more—let's all get in the van.
'Twill make the burden lighter for the SANITATION MAN.

—By Fred Schatz, Stores Dept. (The Fleetwood Craftsman (Div.-Fisher Body, G.M.C.)

War Workers O.K. This New Water Service

You can promote good health, save production time and improve morale by serving drinking water to employees at their machines or on construction jobs . . . *in clean Ajax Paper Cups!*

A "water boy" circulates among the workers, carrying a tank of fresh, cool drinking water; Ajax Cups are supplied from steel dispenser fastened to the tank. This carrier service is a valuable supplement to crisp, clean Ajax Cups at your regular drinking fountains!

Address Dept. 40 at plant nearest you for sample cups and full information.

LOGAN DRINKING CUP CO., *68 Prescott Street, Worcester, Mass.* • PACIFIC COAST ENVELOPE CO., *416 Second Street, San Francisco, Calif.* • U. S. ENVELOPE CO., Los Angeles Division, *2828 East Twelfth Street, Los Angeles, Calif.*

Divisions of United States Envelope Company

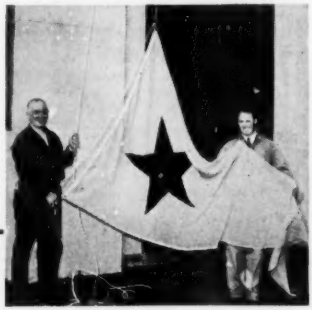
AJAX CUPS

The Good Housekeeping Inspection Committee compares notes. Every plant gets an even break.

How Monsanto Chemical gets plants to think about Good Housekeeping

MONSANTO CHEMICAL COMPANY believes in Industrial good housekeeping. Interplant competition keeps the subject enthusiastically alive. Plants are inspected regularly and starred pennants are given to those with the best record.

The practice of inspecting all



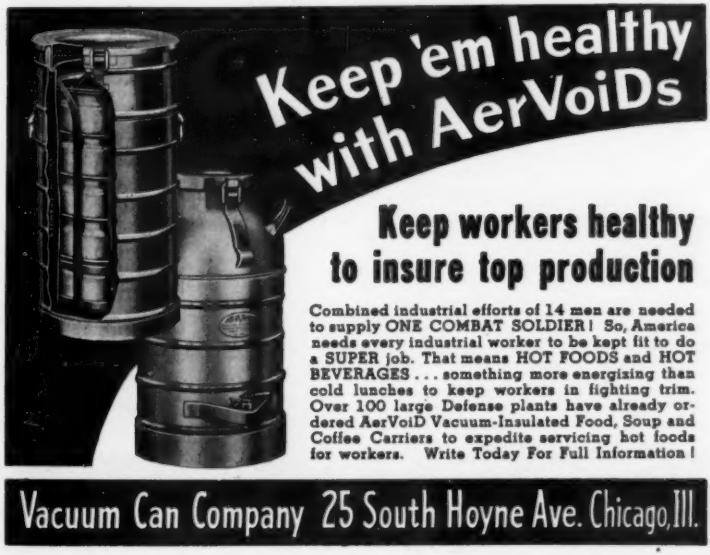
The winning plant proudly displays the Good Housekeeping Award. Their record is a worthy one.

Monsanto Chemical is able to maintain a year round good housekeeping program by active inter-plant competition. The Inspection Committee comes without forewarning and all plants are on their toes.

American operations was inaugurated many years ago and is done annually by two five-man committees. The group one committee grades the company's larger plants. Group two inspects the smaller operations of the company.

The pennants fly on the plant flagstaffs below the American flag. Factors on which the awards are based are those which are controlled directly by local management, such as good housekeeping, proper maintenance of building and equipment, control of working conditions, fire protection, safety measures and devices, and such personnel services as locker rooms, cafeterias, toilets and showers.

In scoring, consideration is given to the type of work and process involved. As is the standard practice in these inspections the committee is assembled on short notice and sends no word ahead, the individual members being put on their honor not to transmit information to their own plants. Thus maintenance of plants on a high plane throughout the year is encouraged.


Keep 'em healthy with AerVoiDs
Keep workers healthy to insure top production
Combined industrial efforts of 14 men are needed to supply ONE COMBAT SOLDIER! So, America needs every industrial worker to be kept fit to do a SUPER job. That means HOT FOODS and HOT BEVERAGES . . . something more energizing than cold lunches to keep workers in fighting trim. Over 100 large Defense plants have already ordered AerVoiD Vacuum-Insulated Food, Soup and Coffee Carriers to expedite servicing hot foods for workers. Write Today For Full Information!
Vacuum Can Company 25 South Hoyne Ave. Chicago, Ill.

New Ja... IN TH...

CLEANING THE AIR CLEANER—The electrostatic precipitator is handling air-cleaning problems in public bulidings and factories. But, as it has grown to very large sizes and is used in places where it must not be shut down, it has developed a serious problem of its own: how to be rid of the mass of dirt it traps from the air. In steel mills, for example, now running uninterruptedly to turn out defense materials, the Westinghouse Precipitron that cleans the ventilating air for vital motors cannot be stopped for maintenance.

A new semi-automatic device now cleans the Precipitron with a brief service interruption to only a small section at a time. A hundred-cell array of Precipitrons is divided into five 20-cell sections. The section to be cleaned is placed in front of one of these sections which is disconnected from the ventilation system and from the power supply. The cleaner has a motor-driven carriage that sweeps slowly up and down in front of the dirty precipitator plates. The carriage has three horizontal rows of nozzles from which water, air, and oil are sprayed in turn over the plates. The operation then stops, after 30 minutes. All the operator needs to do is to start it and a half hour later return and move it to the next section.

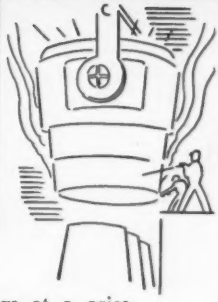
COPPUS ENGINEER BUSY—"In order to devote his full energies to the increasingly vital problem of efficient combustion in industrial plants, Mr. Edwin L. Dennis, Chief Combustion Engineer of the Coppus Engineering Corporation, Worcester, has requested to be relieved of his duties as instructor at Louisiana State University, Baton Rouge, Louisiana. The request has been accepted.

"Mr. Dennis has been associated with the development of the Coppus-Dennis Fanmix Gas Burner, which is said to involve an entirely new principle in gas burner design. His services, particularly in connection with the requirements of gas-burning boilers, stills, heaters and kilns, will be available henceforth on a full-time basis."

HEALTH POSTERS FREE—Realizing the importance of industrial workers' health in relation to production problems, the West Disinfecting Company has made up a series of

posters which are available to safety, welfare and medical departments of

New Ideas THIS MONTH



American industrial plants.

The posters are excellently conceived—sized 9 inches by 12 inches and furnished in red, white and blue

colors. In addition to the two messages illustrated, two others can be had. Make requests for posters to W. J. Flatow, Jr., West Disinfecting Co., Long Island City, New York.

SWEEPING COMPOUND FOR OIL AND GREASE REMOVAL—Carey Sweeping Compound is said to effectively remove oil and grease deposits from floors and driveways. This inexpensive asbestos compound contains no acids or caustics and is applied by sprinkling it on the deposit. The compound can be re-used until thoroughly soaked.

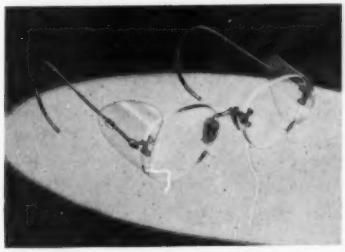
Manufactured by The Philip Carey Mfg. Company, Cincinnati, Ohio, it is available in 50 lb. bags at a price averaging from 3½¢ to 4¢ per pound.

BLACKOUT PAINT—The Skybryte Company, Cleveland, Ohio, has introduced a blackout paint that is said to produce complete opacity with one coat. Withstanding all weather conditions, it drys quickly and is easily applied.

Skyco Blackout can be sprayed or brushed and dries in thirty minutes. Easily removed with a cloth soaked with kerosene or other common solvents. It is available at once.

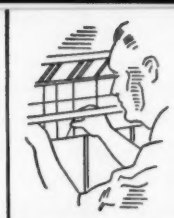
EYE PROTECTION FOR WOMEN WORKERS—The influx of women workers in industry has placed great emphasis on the need for their eye protection.

A new type rimless safety spectacle equipped with Tulca lenses, manufactured by Univis Lens Co., Dayton, Ohio, is said to weigh only one half



as much as glass safety lenses. They are available with or without side shields, which are removable.

This lighter-weight factor is said to be of particular interest to the woman



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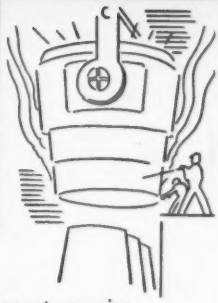

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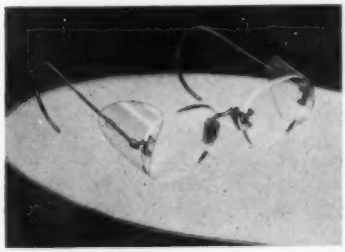


as much as glass safety lenses. They are available with or without side shields, which are removable.

This lighter-weight factor is said to be of particular interest to the woman

worker. The manufacturer states that many plants, today, insist that visitors wear safety lenses.

OIL PROOF APRONS AND GLOVES—Developed expressly to control occupational skin diseases is a new line of oil-proof and solvent-proof gloves and aprons announced by Resistoflex Corporation, Belleville, New Jersey. The gloves and aprons are made of a flexible material with resistance to tearing and abrasion, and

the aprons are supplied both in a transparent type, and a heavy-duty type employing flexible fabric coated on both sides with a film.

According to the manufacturer Resistoflex gloves and aprons are immune to all organic solvents and are said to be successfully used in degreasing operations where protection is needed against trichlorethylene, perchlorethylene, benzol, or petroleum solvents, and in magnaflux operations where they are unaffected by kerosene, varsol, etc. Because the gloves contain no sulphur they do not tarnish highly polished metal surfaces and are recommended for inspection of ball bearings, aircraft parts, etc.

MANUAL ON SANITATION—Because war conditions are rapidly multiplying equipment maintenance and plant sanitation problems in factories and mills, a special new five-page Digest which reviews materials, methods and procedures successfully used for effectively handling 28 essential, commonly recurring maintenance jobs, has just been issued by Oakite Products, Inc., New York.

Prepared for plant maintenance superintendents, safety engineers and other executives, the Digest, in data sheet form, provides may ideas and suggestions for speeding certain jobs, conserving man-hours, increasing maintenance efficiency, improving plant safety, and shortening "down time" for equipment and getting it quickly back into service. Many different types of maintenance work are discussed, such as cleaning machinery and equipment parts by either tank immersion or pressure-spray methods before repair, overhaul or repainting; safely de-scaling Diesel and gasoline engine cooling systems; cleaning air filters; cleaning ammonia condensers, feedwater heaters, other water-cooled equipment; removing carbonized oil sludge deposits from heat exchange units without dismantling; deodorizing and cleaning washrooms, shower stalls, locker rooms and lavatories; washing floors; reclaiming wiping cloths, etc. On each of the 28 different types of work is outlined the material used and method followed, the time saved, the fire or other hazards eliminated, or other advantages gained.

Copies can be had by writing to Oakite Products, Inc., 57 Thames Street, New York.

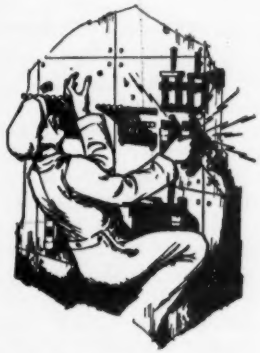
MACHINE TOOL CABINETS—The machinist is offered a handy work bench-cabinet which features security and all-around usefulness. Heavy gauge working surface is useful for small vises and grinders.

Twelve square feet of enclosed stor-

age area are protected by full swinging triple latch doors equipped with padlock hasp or built-in flat key lock. Center shelf is adjustable on 1½ inch centers. Finished in durable Lyon Green baked enamel.

Write Lyon Metal Products, Incorporated, Clark Street, Aurora, Illinois for additional information, mentioning the name of this magazine.

HANDY FUSE PULLER—Shocks, burns, infection and death result from careless fuse handling. The handy fuse puller shown is insurance against injury, lost time, law suits and compensation. Safely removes fuses, adjusts



switches and fuse clips. Solid grip jaws—fits any make of fuse and is tested at 35,000 volts. Comes in four convenient sizes. For further information write Trico Fuse Mfg. Co., Dept. 2, Milwaukee, Wisconsin.

PATRIOTIC SAFETY EMBLEM—Cleveland Overall Company, manufacturers of union-made industrial work garments, announces a new product to complement their line of identification emblems.

The new emblem is the first in a series called "Designs for Safety." As illustrated, wording available at present is "Safety First—Remember Pearl Harbor." The emblem gains further value because of the Victory slogan.

Available in various red, white, and blue combinations, the emblem can be easily attached to the worker's industrial garments. This insignia is made of fast color materials and can be used on garments that are either washed or dry cleaned.

A full crew of men, each wearing a garment sporting the slogan, presents a compelling picture. Request on company letterhead will bring free sample.

DUST COLLECTOR INFORMATION—A 58 page, completely revised catalog destribing American "Dustube" Dust Collectors, has just been issued by American Foundry Equipment Co., Mishawaka, Indiana.

Prepared as a handy manual to serve plant engineers and officials in the selection of control equipment for specific dust problems, it provides full information and photographs of the models available with operating data, construction features and basic specifications.

NEXT MONTH
"First Aid in Industry"

Sanitation at Ford

(Continued from page 12)

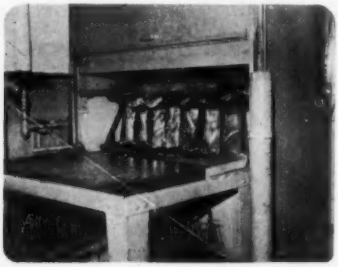
oil-treated rain coats, oiled hats, as well as certain other fabrics which can best be cleaned first in water, then immersed in the disinfectant solution, rinsed in water, and dried.

Engineering

Of many methods that can be used to provide maximum protection under this heading, one will be mentioned briefly: Elimination of irritant material from contact with the worker by enclosing or partially enclosing the operation so that solutions, fumes, vapors, or dusts do not come in contact with the worker.

Application of Protective Skin Creams

These products are intended for application to the hands and other skin surfaces before exposure to



Boots are rinsed, dirt removed, then disinfected. This procedure is an important part of the sanitation program.

excessive dirt, grime, and grease, which are difficult to remove from the skin, or to industrial poisons likely to cause dermatitis. Such a cream leaves a film behind, which, when properly applied, should be dry and not greasy or tacky to touch. Thus this film acts as a barrier to harmful substances likely to irritate the skin. Greases, paints, and pigments are removed along with the cream by easy washing in ordinary soap and water.

Some of the requirements for a cream of this type are: (1) That it forms a uniform, invisible film on the skin surface and interposes a barrier against the penetration of outside materials; (2) That it can be easily removed with soap and water; (3) Not irritating of itself; and (4) Capable of emulsifying outside greases mixed with it to permit their easy removal.

Creams of this type are made just as are the usual cosmetic creams. Several standard types and some special types are usually necessary in the average industrial plant.

Wet Automobile Body Sanding

In this type of work, the body is rubbed with sand paper while wet, considerable amounts of fresh water being used. As the worker's hands and forearms are exposed to water during his entire work period, the skin has a tendency on some of these men to show a marked reaction to the combination of abrasive from the sand paper, chemical action from some of the ingredients of the paint undercoat, and other components which the worker contacts. Such work as this, if not properly controlled, may cause considerable skin reaction, especially in hot weather.

Our company has made provision to protect men on exposures such

as above, by supplying them with a protective cream to mitigate the exposure. To offer protection in the case of wet sanding operations, the protective cream must have water shedding properties. It should leave a film on the skin which is water insoluble. It could contain some bland oils and waxes compounded to make a suitable "protective barrier." To this mixture an antiseptic is incorporated to aid in preventing infection should the skin become abraided or broken from contact with the abrasive. A small amount of non-irritating oil-soluble perfume is added to mask the odor of the oils. Lastly, the cream should be of such a nature that it may be washed off at the end of the work period with warm water and soap. Most of our men on wet sanding operations are now supplied with this protective cream and are encouraged to use it.

Checking Results

Recently we had occasion to check the effectiveness of the protection offered by this cream. Among a group of about 15 wet sanders working on the Hood Job, 7 or 8 showed considerable irritation of the skin on the wrists and forearms. These men had not as yet been provided with a protective cream. Among a second, but much larger group of wet body sanders, only one case of dermatitis developed. This latter group of men were using a protective cream, and as far as we could determine, both of these exposures were of a like character.

Another specific instance in the value of protective creams is shown where large quantities of kerosene are used in our carburetor assembly and test department. This oil caused considerable skin irritation among the workers whose hands and arms were in contact with it. Three to five cases weekly were common. Many could not work in the oil at all. Three years ago these men were provided with a special protective cream. I recently talked with the foreman of this department who told me that they now do not average one case of dermatitis a month from the kerosene. This

SAVE . . *Costly Repairs and Lost Production Time*

Today—more than ever, you cannot afford costly breakdowns of vital machinery, nor loss of man hours of work due to "abrasive dust" in your plant.

Trap this "dust menace" right at the source as it comes off grinding and buffing wheels with Torit Self-contained Dust Collectors.

You'll SAVE not only costly repairs, but initial installation and operating cost. Torits are portable units—easily placed near dust sources—and economical to operate.

Write today for a bulletin.

TORIT MFG. COMPANY 311 Walnut St. St. Paul, Minn.

TORIT
Dust Collectors
SELF-CONTAINED UNITS

PLANT EMPLOYEES... *like* *La Grace*
POWDERED HAND SOAPS
For quick, thorough, easy-on-the-skin clean-ups.
Write for Free Trial
LIGHTFOOT SCHULTZ CO.
663 FIFTH AVENUE, NEW YORK

is a particularly good showing and is even more convincing when it is known that the workers are changed every six weeks, the job being part of a rotating course given to student employees in the plant.

What to Do

As uncleanliness of the skin is the chief predisposing cause of industrial dermatitis, the employer should provide adequate facilities for the care of his employees' personal hygiene while at work. This will include sanitary washrooms equipped with hot and cold running water, a non-irritating soap, towels, and under certain conditions, bath showers.

Another prominent measure is the elimination of irritant materials from contact with the worker by enclosing or partially enclosing the operation so that solutions, fumes, vapors, or dusts are prevented from reaching the worker.

An important factor in the *prevention* of skin infection is the use of protective clothing, provided that this type of equipment is kept in good repair, is cleaned and disinfected periodically after return to stock when used by a worker before being reissued to another employee. Two types of disinfecting solutions are mentioned—a weak solution of hypochlorite for rubber articles, and for more delicate fabrics, a soap solution containing a coal tar or other disinfectant.

The last important control measure is the use of protective skin creams. These creams form a "protective barrier film" between the skin and industrial poisons or dirt and grime likely to cause the dermatitis. These products should be non-irritating, and should, generally speaking, be insoluble or nearly so in the medium against which they are to protect. They should be easily removed at the end of the work period with soap and warm water. At least two or three standard types are necessary. Occasionally, a particular exposure will require a special formulation.

The control measures discussed here, together with the company's continued good housekeeping policy, has lowered the incidence of dermatitis in our Rogue Plant to less than 1½ cases for each 1,000 of plant population per month.

Industrial Health Leaders Meet

Hazards to the health of war workers, arising from the expanding production program, will be attacked by industrial physicians, surgeons, hygienists and nurses meeting at Cincinnati April 13 to 17. This marks the 27th annual meeting of the American Associa-

tion of Industrial Physicians and Surgeons and the third annual meeting of the American Industrial Hygiene Association.

Dr. T. Lyle Hazlett, Medical Director, Westinghouse Electric & Manufacturing Company and president of the Association of Industrial Physicians and Surgeons, terms this is the most important meeting in the 27 year history of his association. It will be devoted to a "post graduate" institute of instruction in conserving the health of America's workers, so as to "keep as many men at as many machines as many days as possible."

Professor Donald E. Cummings, University of Colorado Medical School, president of the Industrial Hygiene Association, declares that America's war workers "will determine the length and the outcome of this struggle."

The meeting opens with medical and surgical clinics at Cincinnati's General Hospital along with a conference on skin affections, most common cause of occupational disease claims in industry. A highlight of the second day's session will be attention to the health of industrial executives, including a consideration of heart disorders.

The third day will be largely devoted to a symposium on lead poisoning. Subjects scheduled for the fourth day include Solvent-Vapor Poisoning, Ventilation of Deep Tunnel Operations and Safe Handling of Magnesium Castings.

The final sessions will cover prevention of tellurium fumes, a hazard accentuated by war production, and other health threats, like lead chromate, encountered in metal industries.

Busy Industry Gets Safety Underfoot With MELFLEX

Eliminate underfoot hazards. . . . Use Melflex Safety Treads and heavy duty flooring. Be assured of safe, dependable, maintenance free service.

Direct factory shipments immediately available. Write today for full information. New catalog answers every underfoot safety problem.

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415 Wheeler Lane, Akron, Ohio

SPEED UP PRODUCTION
with
Steel-Grip Hand Pads

Every minute is vital. Gain precious minutes, step up needed production with Steel-Grip Hand Pads. Chrome tanned cowhide with extra palm and thumb patch. Slip on and off easily, give freedom of grip, keep hands cool. Handle more sheets, castings, bars, jagged or rough materials faster. Or what's your problem? Over 4300 proved Steel-Grip safeguards may give you an immediate answer. Used by big industrials since 1910. Write for catalog or state your need today.

INDUSTRIAL GLOVES CO., 732 Garfield, Blvd., Danville, Ill.

JOHNSON ANKLE ACTION RUBBER LADDER SHOES
prevent accidents

★ These shoes are endorsed by insurance companies and safety engineers everywhere.

$1.95 per pair for straight ladders. A trial order will prove their many merits.

JOHNSON LADDER SHOE CO. Eau Claire, Wis.

Safe House at Westinghouse

(Continued from page 9)

The large divisions of the works employ full-time safety supervisors who assist the foreman in enforcing safety rules and in providing proper safeguards to eliminate accident hazards. They report direct to the superintendent of the division. All minor and lost-time accidents are investigated by them, and they also work with the tool supervisor and foremen in eliminating their causes. In addition, they promote safety activities, organize committees and assist the Medical and Industrial Relations Departments in accident prevention work.

One of the most recent safety steps has been the adoption of a red Safety Inspection Tag. This tag is attached to all manufacturing or experimental equipment prior to installation or construction. The equipment must be approved, in writing, on the attached tag by the safety supervisor and the tool supervisor, or engineer. After the tag is properly signed by all concerned, it is removed by the tool supervisor. The shop supervisor is then informed that the equipment is ready for operation, and he is instructed on the safe operation of the equipment.

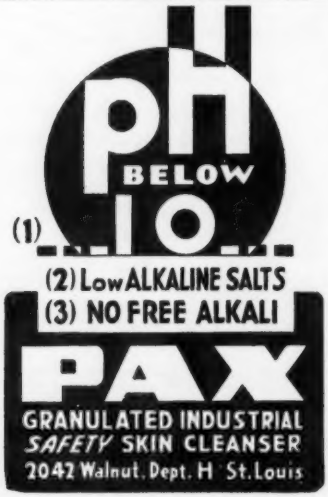
Medical care of injuries is most essential. Infections may be avoided and loss of time prevented. Westinghouse employes must report to the Medical Department or First-Aid room for treatment of all injuries no matter how slight. This also applies in case of sickness occuring while an employe is on duty.

Safety Publicity

Safety is similar to other industrial relations activities in that it must be advertised in order to obtain the support of the employes and retain their interest. It is not advisable to cause undue excitement by conducting safety campaigns, as it has been found that momentary enthusiasms produce no lasting good. Better results can be obtained by a quiet steady effort on the part of safety supervisors with the assistance of the safety committeemen and the supervisory force.

Properly worded posters distributed throughout the works departments, that call attention to the advantages of working safely, have a good effect. Neon signs also help in that they are odd and attract attention by their brilliant light and colors.

Posters that are furnished by the



Extinguish MAGNESIUM FIRES

easily and quickly with

Pulmosan MAGOUT POWDER

Other Air Raid Precaution Equipment

Asbestos Suit, Hood, Gloves and Mittens
Glareproof Goggles
Crash Helmets
Stretchers

Write for full details and prices

• The newly developed Pulmosan Magout Powder effectively extinguishes fires caused by Magnesium shavings in machine shops, or by Magnesium incendiary bombs. Supplied in handy, instant-action tubes for sprinkling on fire; also in bulk quantities. All plants machining Magnesium metal or in areas within bombing range, should keep a supply of Magout Powder on hand. Write for prices.

SEND FOR FREE TEST SAMPLE

PULMOSAN SAFETY EQUIPMENT CORP.

Dept. OH, 176 Johnson St., Brooklyn, N.Y.

National Safety Council, Elliott Service and safety equipment manufacturers, placed upon bulletin boards, instruct the employes in how to avoid accidents and the proper way to perform their work without taking unnecessary chances. Home-made posters are also used to advantage and have a more personal appeal than those provided by outside suppliers.

Departmental safety contests and the awarding of prizes attract attention and also create an interest in accident prevention. In addition, show cases are provided for the purpose of displaying samples of safety equipment and to advertise the sale of safety shoes to the employes.

Educational Activities

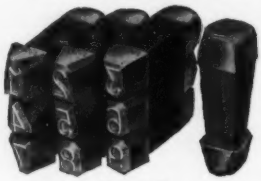
National and local safety conventions and expositions provide a means of meeting other people who are engaged in the same activity and of viewing samples of the latest designs of safety equipment. New ideas are discussed and new methods explained that are used later in creating an added interest in safety among the employes. If there are conventions held by local safety councils within the community in which the plant is located, there is an opportunity to stimulate the interest of the supervisory force and the safety comitteemen by sending them as delegates. The exhibits provide a means of acquainting the delegates with the latest designs of accident prevention equipment.

When groups of workmen are widely separated it is advisable to organize classes in first aid, as medical attention may be difficult to obtain quickly enough to pre-

vent serious or fatal results in case of accidents. As the Medical Department is in charge of all first aid work in the East Pittsburgh works of Westinghouse and first aid stations are located in various parts of the plants, it is not necessary to train the employes in this work. However, as persons receiving an electric shock must have immediate attention, classes are held to instruct at least ten per cent of all the employes in the Schaeffer or Prone Pressure Method of Resuscitation. These classes are held during working hours and are in charge of the Medical Department. The employes are paid their average earned rate while attending classes. One lesson, lasting approximately one hour, is the usual time required to receive proper instruction. Written instruction for future refence are also provided those who attend.

Classes of instruction in the safe handling and use of oxyacetylene welding equipment are also organized and attended by a selected

SAFETY
(Reg. Trade Mark)
WEDGE GRIP
LETTERS AND FIGURES
• NO SPALLING!
• NO MUSHROOMING!



(Patented)

• For Tough Stamping Jobs.
• Deeper Impressions.
• Knurled Sides Assures Positive Grip.
• More Safety.
• Any size Character from 1/16" to 1" Available for prompt shipment.

Write for Prices and Literature

M. E. CUNNINGHAM CO.
91 E. Carson St. Pittsburgh, Pa.

SAFETY FIRST
for
all
STRAIGHT
LADDERS

DAYTON UNIVERSAL SAFETY LADDER SHOES are easily installed on your present straight ladders. These shoes prevent slipping. Your choice of renewable treads—Rubber Suction Grip—Neoprene Suction Grip—Suberac Cork Treads. Tempered steel spike toes for all weather use.

Write for Prices and Catalog

The DAYTON Safety Ladder Co
121-123 W. THIRD ST.
CINNCINATI, OHIO.

number of employes. These classes are conducted by the Welding School, which is part of the Works Industrial Relations Department.

Magazines and booklets published by the National Safety Council are distributed to the supervisory force to keep them in touch with the broader phases of accident prevention activities.

Accident Reports

After making an investigation of a number of serious accidents it was found that the cause of such accidents is similar to the cause of minor accidents. Due to this investigation it was decided to obtain from the Medical Department a weekly report of the name, section, check number and nature of injury of all the employes of each works division who apply to the department for first aid. After recording the summary of each report for the purpose of following the trend of minor accidents, the reports are sent to the superinten-

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DUPOR
"Noser"
RESPIRATOR NO. 1
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Each year Westinghouse enters the Accident Prevention Contest conducted by the Department of Labor and Industry, Commonwealth of Pennsylvania. This contest embraces all establishments in the state having at least 15,000 or more man-hours exposure per year. Large establishments with more than one operating department may enter such a department as a separate unit, provided such a separate department has an average of 25 or more employes or working a total exposure of 50,000 or more man-hours for the year.

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As the different industrial organizations are classified into groups, depending upon the nature of their product, the East Pittsburgh plant competes in the Electrical Manufacturing Group. Any of the works sections or combination of sections with a sufficient number of employes and working the required hours as listed above, having an accident rate that is better than the group as a whole, receive a merit certificate. The sections having no accidents during the year receive an honor certificate.

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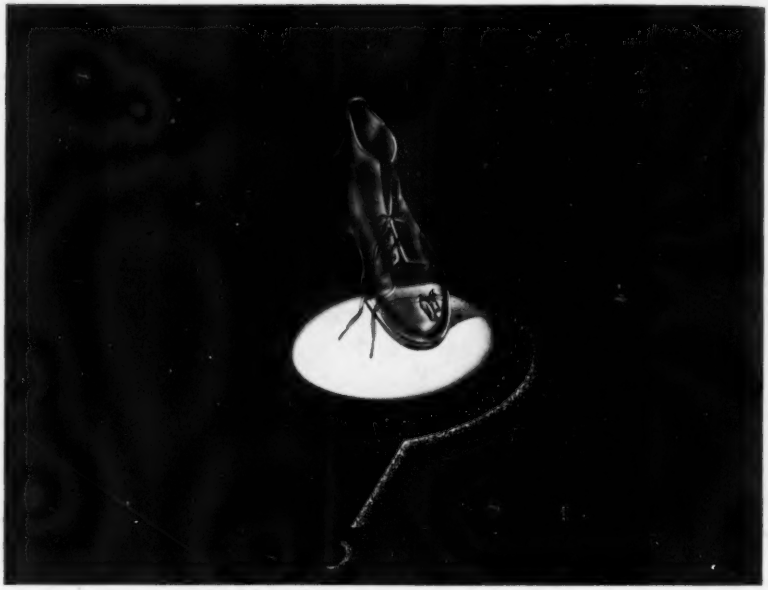

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